



Process safety management fundamentals

Pretest

1-.....is most important step in process risk management.

a-Hazard identification

b-Risk Analysis.

C-Residual-risk management

D-Reduction of risk

2-(Something that has the potential to cause harm).This statement defined

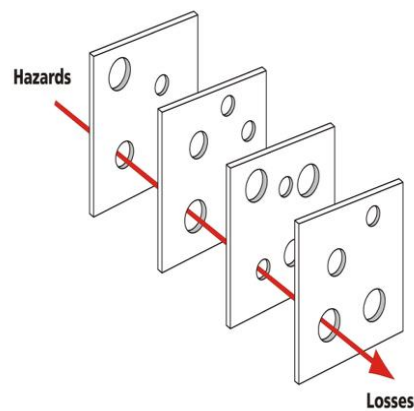
a-Risk

b-Hazard

c-HIPO

d-Near Miss

3- This shape is named as



a-Swiss cheese model

b-spinning disc model

c-ALARP

D-SFAIRP

4-Houston Model was for

a-Risk Management Lifecycle

b- Accident Process

c- PTW Process.

d-Two of These.

5-.....established CCPS(Center of Chemical Process Safety):

A-AICHE

b-ICHEMIE

C-EPA

d-None of these

6-CCPS PSM elements are

a-14

b-12

c-20

d-6

7-The isolation of energy sources or equipment as part of a permit to work is known as.

A. Lockon, tagoff.

- B. Lockon, tagon.
- C. Lockout, tagon.
- D. Lockout, tagout

8–Steam that does not wet the surface it touches is usually called.

- A. Vacuum.
- B. Superheated.
- C. High pressure.
- D. Saturated.

9– which standards and codes interested in process safety management HIGHLY ?

- a– API
- b– IEC
- c– ASME
- d– NFPA

10– Boiling point of Nitrogen is···..

- a – -196

b - -5

c - 0

d- +6

11-.....technique are in which frequency and severity are approximately quantified within ranges.

a-HAZID

b-LOPA

C-FTA

D-FMEA

12-1. SARA Title III required companies to develop emergency preparedness plans; recognition, knowledge,

and inventories of hazardous chemicals; and to report toxic releases.

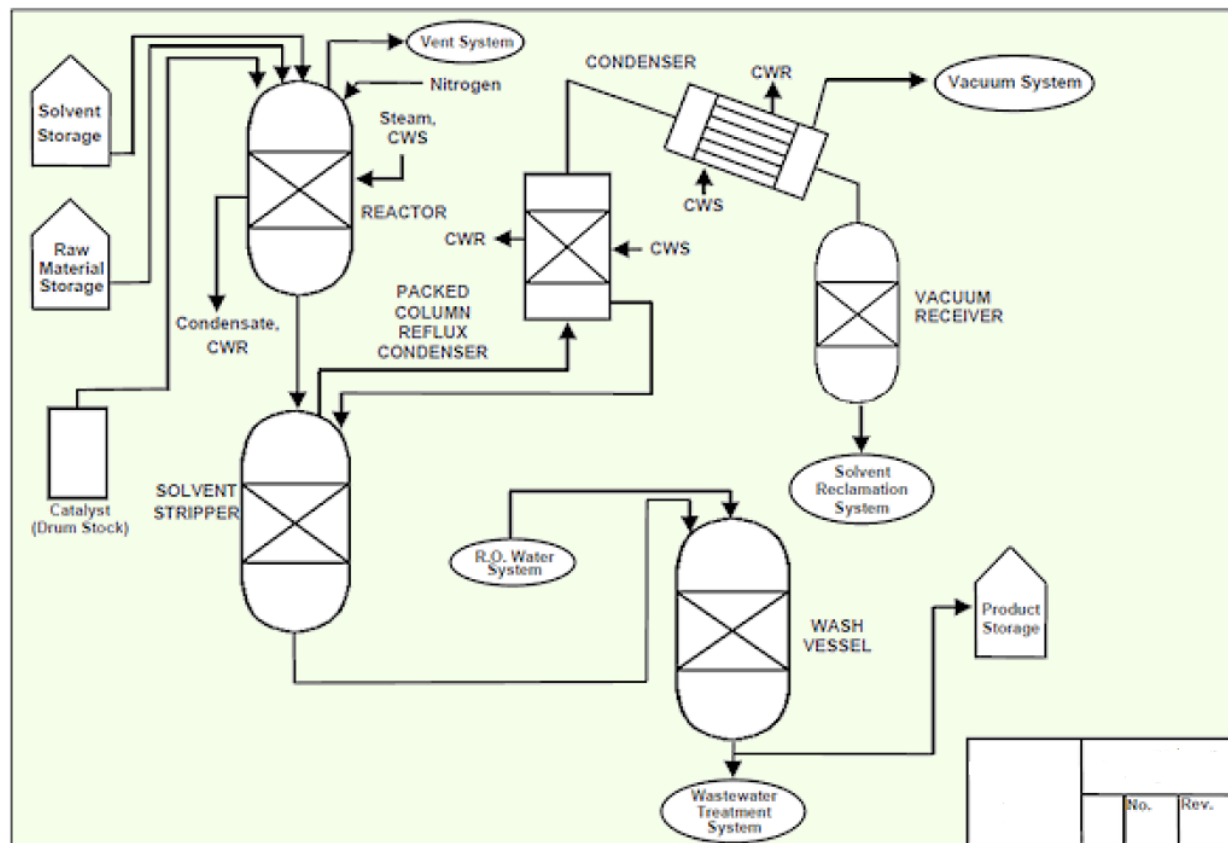
a. true

b. false

13-To comply with the OSHA PSM standard, employers must audit all process operations at least every

- _____.
- a. two years
 - b. three years
 - c. four years
 - d. five years

14-This is



- a-Process Flow Diagram
- b-Piping and instrumentation drawing
- c-Block flow diagram

d-Mass Balance

15-Refresher training should be each YEARS

A-3

b-5

c-2

d-1/2

16-Which of the follow methods of hazard analysis uses specific guide words, which are systematically applied to parameters to identify the consequences of changes in the design of a process?

a. Fault Tree Analysis

b. Failure Mode and Effect Analysis

c. "What If...?"/Checklist

d. HAZOP Study

17-.....bottom -up technique

a-HAZOP

B-HAZID

C-FTA

D-BOWTIE model

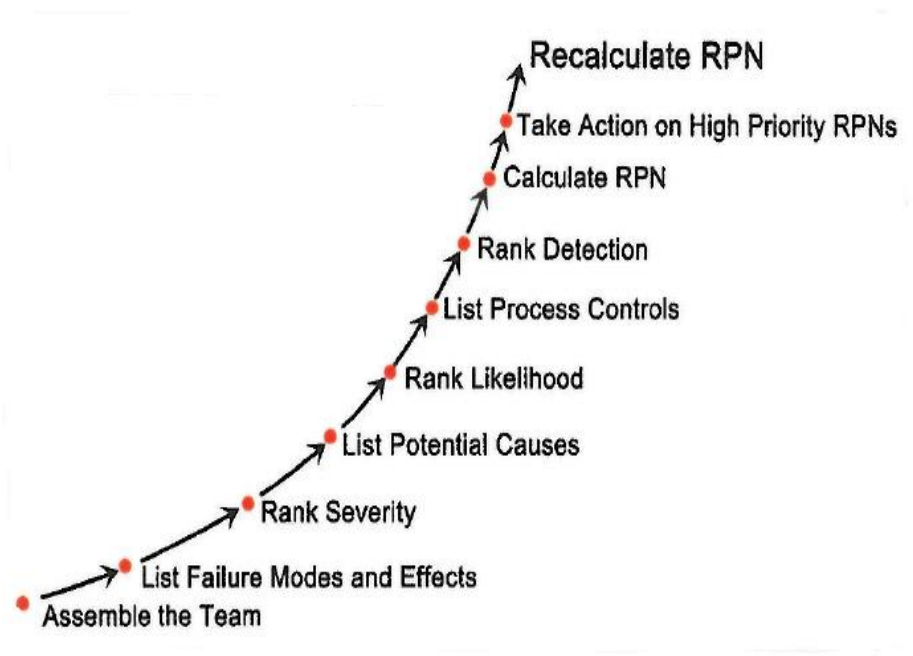
18- This is process

a-HAZOP

b-FMEA

C-FMECA

D-MARKOV



19-The transfer of heat through solid is known as.

A. Convection.

B. Direct burning.

C. Radiation.

D. Conduction.

20-What is the main purpose of a pressure relief valve fitted to a vessel.

A. Prevent vessel rupture.

B. Prevent thermal runaway.

C. Prevent vessel collapse.

D. Prevent vessel reaction

21- Any of these is highly flammable ?

a- Liquid with flash point 10°C

b- Liquid with flash point 32°C

c- Liquid with flash point 5°C

d- Liquid with flash point 80°C

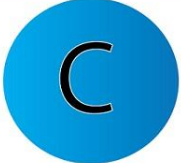
22-This types OF FIRE EXTINGUISHERS belong to....

a-USA

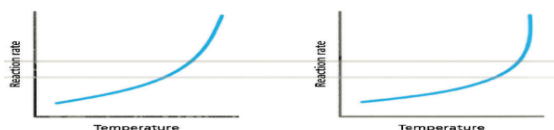
b-UK

c-Australia

d-All

		Ordinary Combustibles	Wood, Paper, Cloth, Etc.
		Flammable Liquids	Grease, Oil, Paint, Solvents
		Live Electrical Equipment	Electrical Panel, Motor, Wiring, Etc.
		Combustible Metal	Magnesium, Aluminum, Etc.
		Commercial Cooking Equipment	Cooking Oils, Animal Fats, Vegetable Oils

23- Which one act as an EXPLOSION REACTION



a-The right

b-The left

3-None of these

4-Both of these

24-PRESSURE SAFETY VALVE IS CONSIDERED AS...

A-PREVENTATIVE CONTROL MEASURE

B-MITIGATION

C-PASSIVE

D-A & C

25- Incident investigation report is considered as...

a-active

b-reactive

c-proactive

d-All of these

26- 1ST OF HIRARCHY OF risk CONTROL IS...

A-Elimination

b- substitution

c-PPE

d-Administrative controls

27- electronic ptw was included in

a-Hsg250

b-OSHA process safety

c-Both of these

d-None of these advised.

28- A fitter was asked, by his supervisor, to dismantle heat exchanger 347A.

The fitter thought the supervisor said 347E and started to dismantle it. Supervisor could avoid confusion with saying:

a-347A NOT 347E

B-1ST HEAT EXCHANGER NOT THE 5TH.

C-347 ALPHA NOT ECHO

D-BAND C ARE CORRECT

29-At...° the temperature in Fahrenheit equal Celsius.

a- -40

b- 0

c- 32

d- Impossible

30-Which book for trevor kletz

a-What went wrong !!

b- Root cause analysis

c- LOPA

d-HAZOP technique

31-Water under pressure can be used as a heat-transfer medium instead of flammable

oils. This example for

simplifying

b - intensifying

c-substituting

d-attenuating

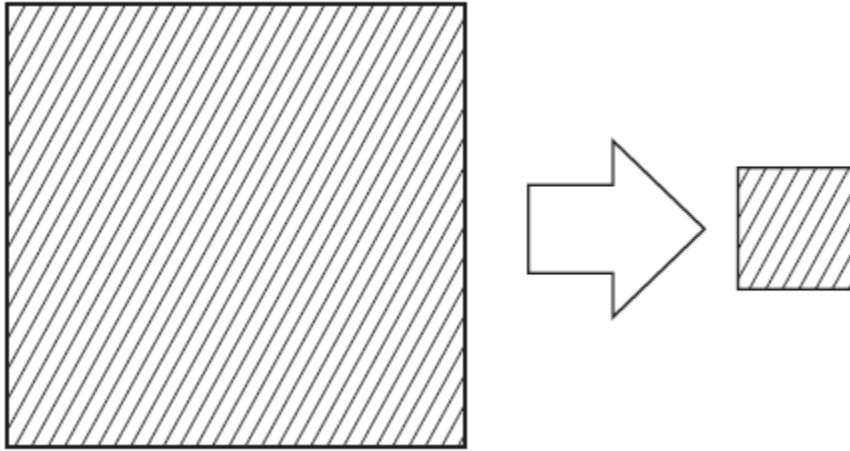
32- This shape represents

a- simplifying

b - Intensifying or minimizing

C-substituting

D-attenuating



33- “The probability that the harm will occur” is the...

a-risk

b-hazard

c-near miss

d-dangerous occurrence

34- Permits can be produced electronically and a number of companies are using this type of system, this statement is correct..

a-As per some guidelines like HSG250 .

B-In CCPS

C-In OSHA

D- IN petrochemical industries only

35-A blend of engineering and management skills focused on preventing catastrophic accidents and near misses particularly structural collapse ,explosions ,fires, toxic releases associated with loss of containment of energy or dangerous substances such as chemicals and petroleum products. This represents the definition of process safety in.

a-CCPS

b- ICHHEME

c-AICHE

d-a & c

36-Near miss is defined as...

a-An incident in which no injury or damage

Results

b- An unplanned or unexpected event arising out of, or in the course of, work which results in injury

c- A readily identifiable event as defined under

national laws and regulations, with potential to cause an injury or disease to persons at work or to the public

d-None of these

37-For any health and safety or process safety system management ,

Plan step should include...

A -Permit to work

b- Organization Policy

c -Proactive control measures

D- Benchmarking

38-These are protection layers except

a-Human Error

b-Human intervention

c-SIS

D-psv

39- These are independent protection layers except

a-pressure control valve to flare

b-PSV

C-condensate bund wall or dike

d-None of these

40-From PROCESS SAFETY lagging indicators...

a-audits

B-accidents records

c- PTW review

d- All

41-.....

led to the formation of the Center for Chemical
Process Safety (CCPS) in 1985.

a-BHOPAL DISASTER

B-BP texas

C-BOTH OF THEM

D-None of these

42-What can go wrong? Equalize ...

a-Hazard

b-Risk

c-consequences

d-Likelihood

43-The volume of a circle with diameter 14 m is.....m³.

a-154

b-44

c-205.333

d-None of these

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